

REMARKS

Claims 1 and 8 have been amended. Thus, claims 1-19 remain presented for examination. Support for the amendments to claim 1 may be found in the specification at page 13, line 18 and at page 17, lines 19-20. Support for the amendments to claim 8 may be found in the specification at page 23, line 10 and at page 26, line 21. Thus, no new matter has been added. Reconsideration and withdrawal of the present rejections in view of the comments presented herein are respectfully requested.

Rejection under 35 U.S.C. 103(a)

Claims 1-9, 11, 13-14 and 16-19 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Aoi (US 5,837,420).

Claim 1 has been amended to recite a base material for a pattern-forming material comprising greater than 80% by weight of a low molecular weight compound (X1), wherein the polyhydric phenol compound (x) constituting the low molecular weight compound (X1) has a molecular weight of 450 to 1,500. Similarly, claim 8 has been amended to recite a base material for a pattern-forming material comprising greater than 80% by weight of a protected material (Y1), wherein the polyhydric phenol compound (y) constituting the protected material (Y1) has a molecular weight of 450 to 1,500.

As previously noted by Applicants, the present invention uses a specific low molecular weight compound as the main component of the base material (i.e., greater than 80% by weight of the entire base material) which enables formation of a fine pattern with reduced LER and a high level of resolution (specification at page 38, lines 4-7).

As pointed out by the Examiner at page 2 of the Office Action, Aoi teaches that the acid decomposable dissolution inhibiting resin has a molecular weight of 2,000 to 200,000 and a molecular weight dispersity of 1.0 to 1.6 (col. 38, lines 56-67) in an amount of 40 to 99% by weight of acid decomposing groups (col. 39, lines 8-9). Aoi explicitly teaches that, when the molecular weight of the acid decomposable dissolution inhibiting resin is less than 2,000, the reduction of film thickness in the unexposed area by development becomes disadvantageously large (col. 38, lines 58-60). Thus, Aoi explicitly teaches away from the use of a low molecular weight resin having a molecular weight of 450 to 1,500 in an amount of greater than 80% by weight as presently claimed.

Further, as pointed out by the Examiner at pages 2-3 of the Office Action, Aoai also teaches the use of a low molecular weight compound with a molecular weight of 3,000 or less, but only in an amount of 3 to 50% by weight (col. 71, 60-65). As such, Aoai does not teach or suggest the use of a low molecular weight compound as a main component of the base resin (i.e., in an amount greater than 80% by weight) as presently claimed. Applicants have unexpectedly discovered that excellent results can be obtained when a low molecular weight resin having a molecular weight of 450 to 1,500 in an amount of greater than 80% by weight. The cited combination of prior art does not suggest either of these claimed features. Moreover, in accordance with M.P.E.P. 2141.02, Aoai's teaching away from the recited molecular weight of 450 to 1,500, must be considered in evaluating the patentability of the claims. In view of this teaching away, the cited combination of references would not lead one having ordinary skill in the art to the presently claimed invention. As such, the presently claimed invention is nonobvious over the cited combination of references, and Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. §103(a).

CONCLUSION

Applicants submit that all claims are in condition for allowance. However, if minor matters remain, the Examiner is invited to contact the undersigned at the telephone number provided below. If any additional fees are required, please charge these to Deposit Account No. 11-1410. Should there be any questions concerning this application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 7/23/09

By: 

Neil S. Bartfeld, Ph.D.
Registration No. 39,901
Agent of Record
Customer No. 20,995
(619) 235-8550